



JENKINS & KLING, P.C.
ATTORNEYS AT LAW

Stephen L. Kling, Jr.
Email: skling@jenkinskling.com

Admitted to Practice in
Missouri

October 18, 2016

Board of Adjustment
City of Kirkwood
139 South Kirkwood Road
Kirkwood, Missouri 63122

RE: *St. John Vianney High School Variance Request Submitted October 6, 2016*

Dear Members of the Board of Adjustment:

This firm and the undersigned represent St. John Vianney High School. Enclosed herein please find twelve (12) copies of a revised lighting plan to be substituted for the previously submitted lighting plan. After significant analysis and study, Musco Lighting has designed a new plan that is far superior to the prior plan and has enough illumination to be used in accordance with applicable guidelines and regulations. Some features of the new plan are:

1. Only 56 of the 66 lights will be needed to be on at one time;
2. There are only 3 properties which are impacted by more than 0.1 footcandles at the property lines;
3. Vianney is advised that 2 of the 3 affected property owners do not object to the lights and Vianney anticipates providing confirmation at the hearing in connection with their presentation of evidence;
4. The impact levels for the 3 properties have all been reduced dramatically so that now the highest reading of the 3 properties is .2, .9, and 1.3, respectively, and in most cases that highest number affects only a portion of the property line.

Please substitute this new plan as mentioned above and advise of the anticipated hearing date on Vianney's variance request at your earliest convenience.

Sincerely,

JENKINS & KLING, P.C.

By: 

Stephen L. Kling, Jr.

SLK/cc
Enclosures

cc w/enc: John M. Hessel, Esq.

EXHIBIT "13"



PROJECT
Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY
Name: Baseball
Size: Irregular 320' / 370' / 304'
Spacing: 30.0' x 30.0'
Height: 3.0' above grade

CONSTANT ILLUMINATION

	Infield	Outfield
Guaranteed Average:	60	40
Scan Average:	61.4	46.1
Maximum:	79	79
Minimum:	31	4
Avg / Min:	1.99	10.53
Max / Min:	2.56	17.95
UG (adjacent pts):	1.58	2.74
CUR:	0.68	
No. of Points:	25	89

LUMINAIRE TYPE: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 56
Avg KW: 87.58 (95.2 max)

Guaranteed Performance: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

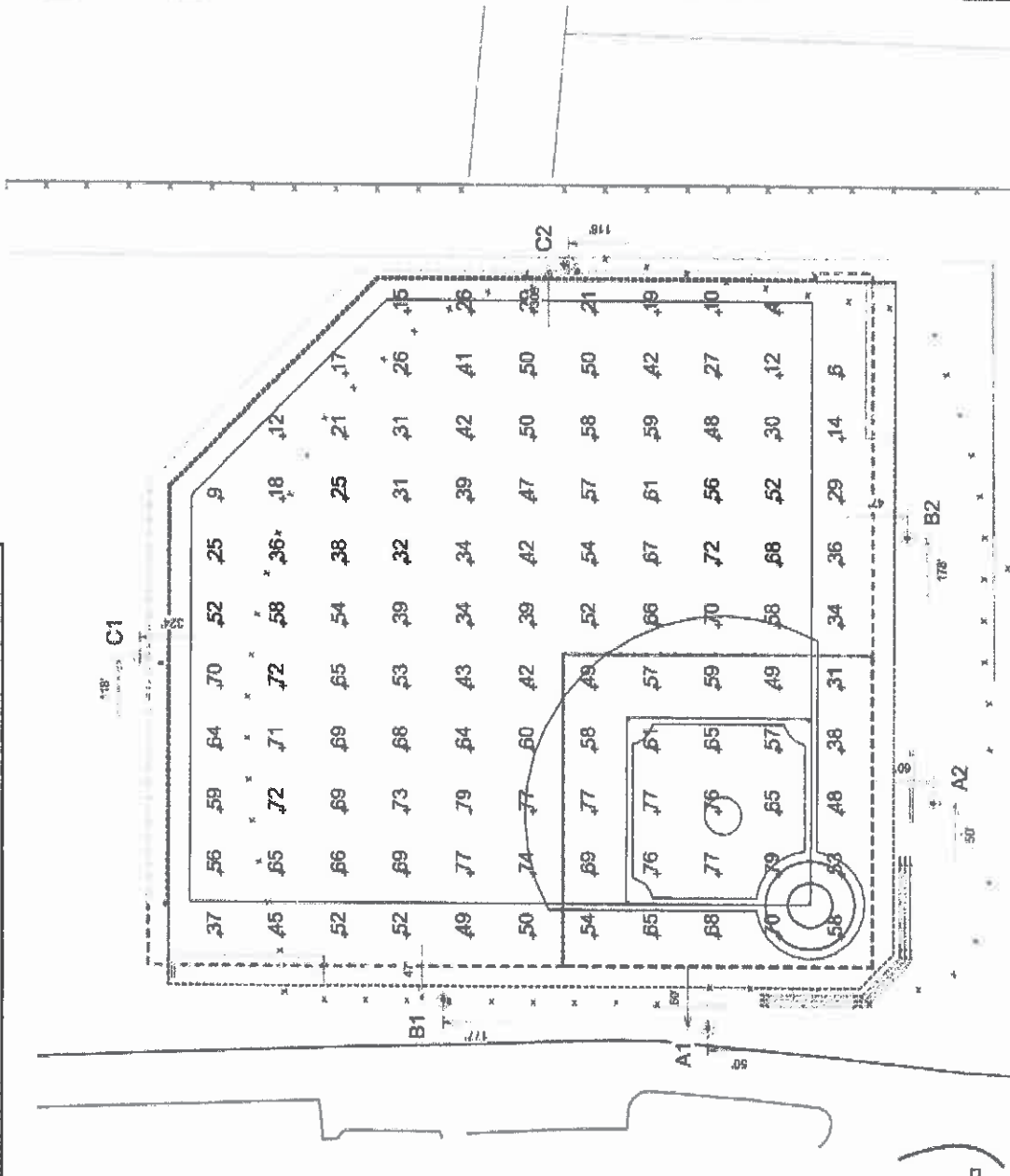
ENGINEERED DESIGN
By: Justin Van Soelen
File # / Date: 171842-D-prod-spirr1 12-Oct-16

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	Luminaires		QTY / POLE	THIS GRID	OTHER GRID
				TYPE	HEIGHT			
2	A1-A2	70'	4'	1500W MZ	24'	7	7	0
1	B1	80'	4'	1500W MZ	24'	16	13	3
1	B2	80'	80'	1500W MZ	24'	16	12	4
1	C1	70'	70'	1500W MZ	24'	10	9	1
1	C2	70'	70'	1500W MZ	24'	10	8	2
5	TOTALS					56	56	10



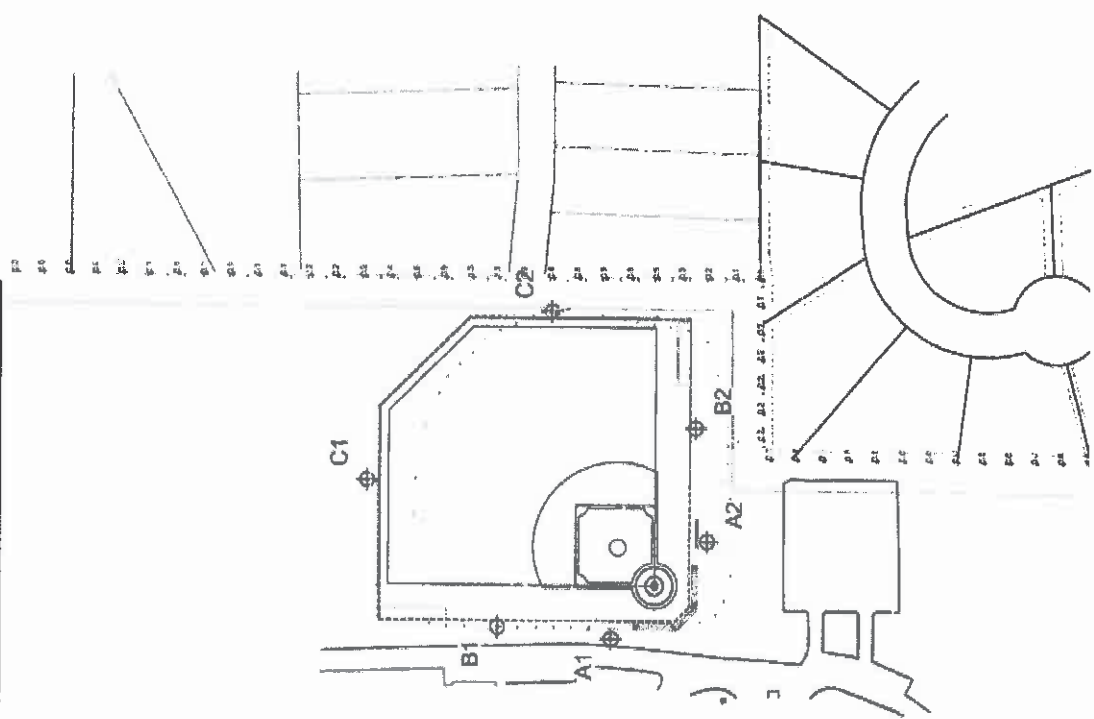
Pole location(s) dimensions are relative to 0,0 reference point(s)

SCALE IN FEET 1 : 80



EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	INSTALLING HEIGHT	Luminaires			OTHER
					LAMP TYPE	QTY / POLE	THIS GRID	
2	A1-A2	70"	4'	74'	1500W MZ	7	7	0
1	B1	80"	4'	84'	1500W MZ	16	13	3
1	B2	80"	-	80'	1500W MZ	16	12	4
1	C1	70"	-	70'	1500W MZ	10	9	1
1	C2	70"	-	70'	1500W MZ	10	8	2
6			TOTALS			66	56	10



SCALE IN FEET 1 : 200



Pole location(s) Ⓢ dimensions are relative to 0,0 reference point(s) Ⓢ

MY PROJECT
Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY
Name: Property Line
Spacing: 30.0'
Height: 4.9' above grade

CONSTANT ILLUMINATION
Entire Grid
Scan Average: 0.252
Maximum: 1.35
Minimum: 0.01
No. of Points: 53
Luminaire Type: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 56
Avg KW: 87.58 (95.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.
Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN
By: Justin Van Soelen
File # / Date: 171842-D-prod-spr181 12-Oct-16

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ILLUMINATION SUMMARY



MY PROJECT
Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY
Name: Parcel 1
Spacing: 30.0'
Height: 1.6' above grade

CONSTANT ILLUMINATION
Scan Average: 0.088
Maximum: 0.07
Minimum: 0.02
No. of Points: 21
Luminaire Type: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 56
Avg KW: 87.58 (95.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.
Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

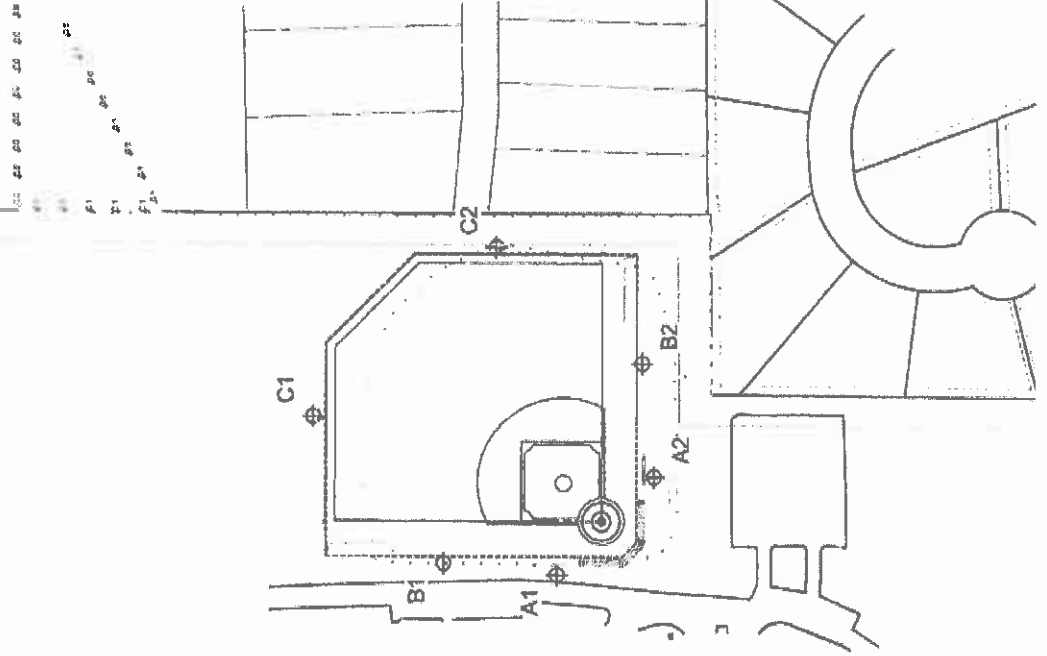
ENGINEERED DESIGN
By: Justin Van Soelen
File # / Date: 171842-D-prod-spill R1 12-Oct-16

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ILLUMINATION SUMMARY

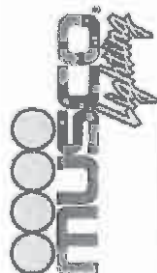
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	BRACING HEIGHT	LAMP TYPE	QTY / POLE	16S GRID	OTHER GRID
2	A1-A2	70"	4'	74'	1500W MZ	7	7	0
1	B1	80"	4'	84'	1500W MZ	16	13	3
1	B2	80"	-	80'	1500W MZ	16	12	4
1	C1	70"	-	70'	1500W MZ	10	9	1
1	C2	70"	-	70'	1500W MZ	10	8	2
6				TOTALS		56	56	10



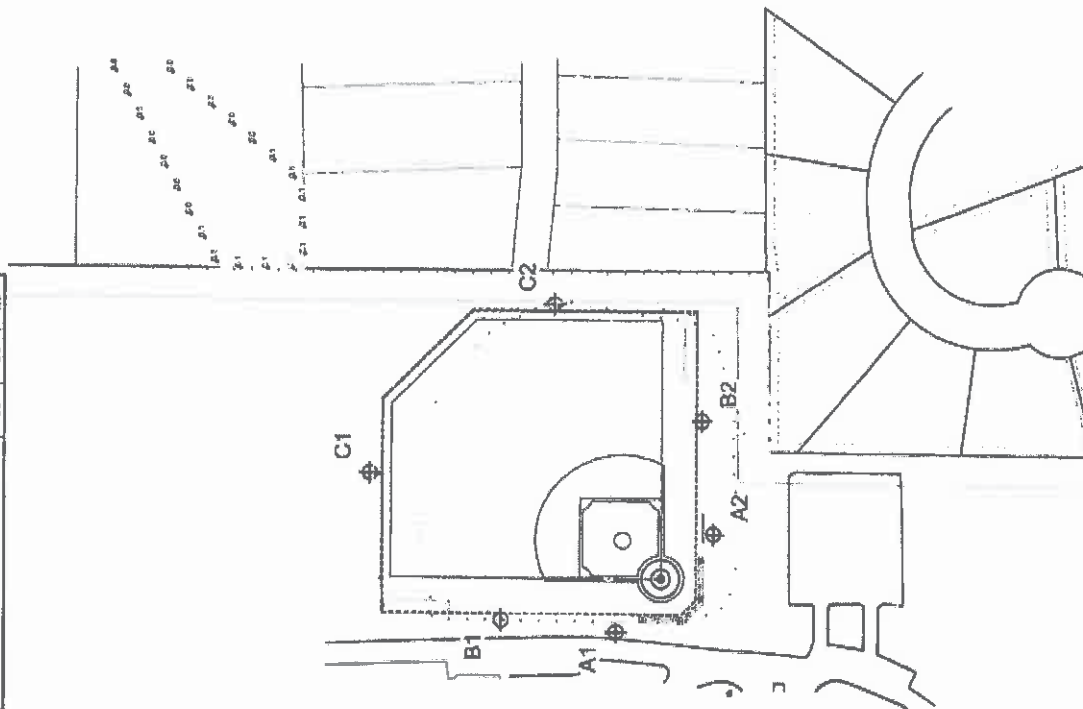
Pole location(s) dimensions are relative to 0.0 reference point(s)

SCALE IN FEET 1 : 200



EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRES		QTY / POLE	TNS GRID	OTHER GRIDS
					LAMP	TYPE			
2	A1-A2	70"	4'	74'	1500W MZ		7	7	0
1	B1	80"	4'	84'	1500W MZ		16	13	3
1	B2	80"	-	80'	1500W MZ		16	12	4
1	C1	70"	-	70'	1500W MZ		10	9	1
1	C2	70"	-	70'	1500W MZ		10	8	2
6	TOTALS						66	56	10



SCALE IN FEET 1:200



Pole location(s) Ⓢ dimensions are relative to 0.0 reference point(s) Ⓢ

MY PROJECT

Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY

Name: Parcel 2
Spacing: 30.0'
Height: 2.2' above grade

CONSTANT ILLUMINATION

Scan Average:	0.057
Maximum:	0.13
Minimum:	0.02
No. of Points:	22
Luminaire Type:	Green Generation
Design Usage Hours:	5,000 hours
Design Lumens:	134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	56
Avg KW:	87.58 (95.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and for the "Musco Control System Summary" for electrical sizing.

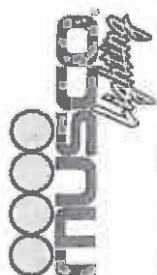
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN

By: Justin Van Soelen
File # / Date: 171942-D-prod-spillR1 12-Oct-16

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ILLUMINATION SUMMARY



MY PROJECT
Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY
Name: Parcel 3
Spacing: 30.0'
Height: 2.1' above grade

CONSTANT ILLUMINATION
Entire Grid
Scan Average: 0.041
Maximum: 0.07
Minimum: 0.02
No. of Points: 12
Lamp Name: MFC-1000
Luminaire Type: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 56
Avg KW: 87.58 (95.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.
Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

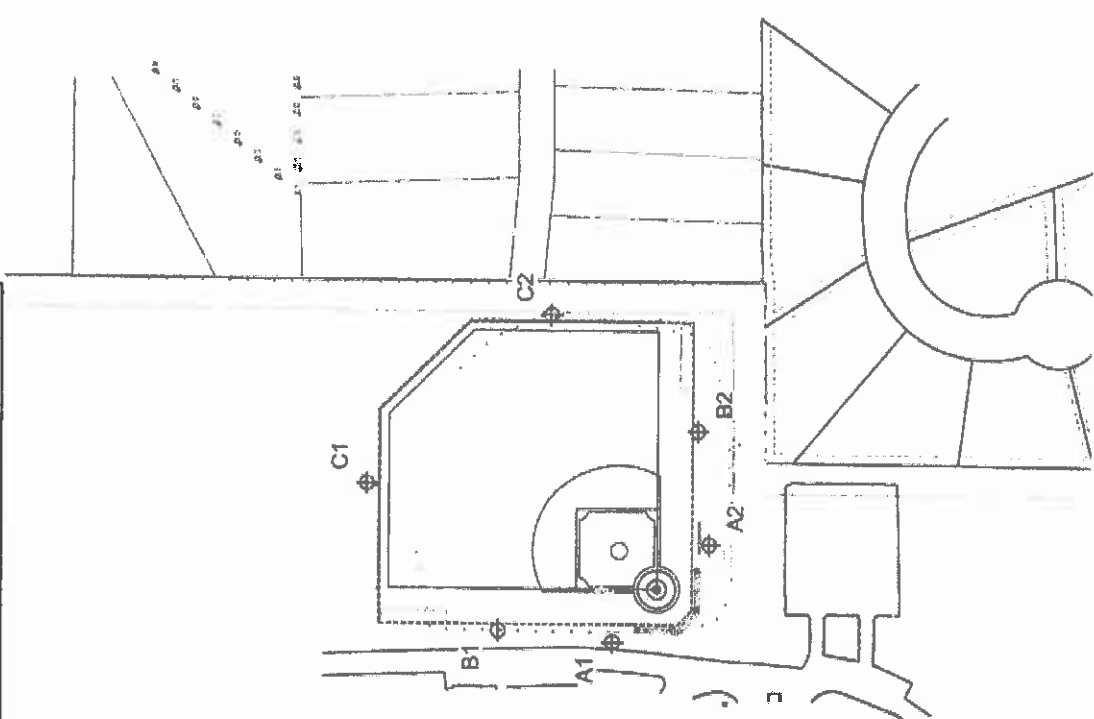
ENGINEERED DESIGN
By: Justin Van Soelen
File # / Date: 171842-D-prod-spillRI 12-Oct-16

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	Luminaires			QTY / POLE	THIS GRID	OTHER GRIDS
					TYPE	WATTAGE	FEET			
2	A1-A2	70"	4"	74"	1500W MZ	1500	7	7	7	0
1	B1	80"	4"	84"	1500W MZ	1500	16	13	13	3
1	B2	80"	-	84"	1500W MZ	1500	16	12	12	4
1	C1	70"	-	70"	1500W MZ	1500	10	9	9	1
1	C2	70"	-	70"	1500W MZ	1500	10	8	8	2
6	TOTALS						66	56	56	10

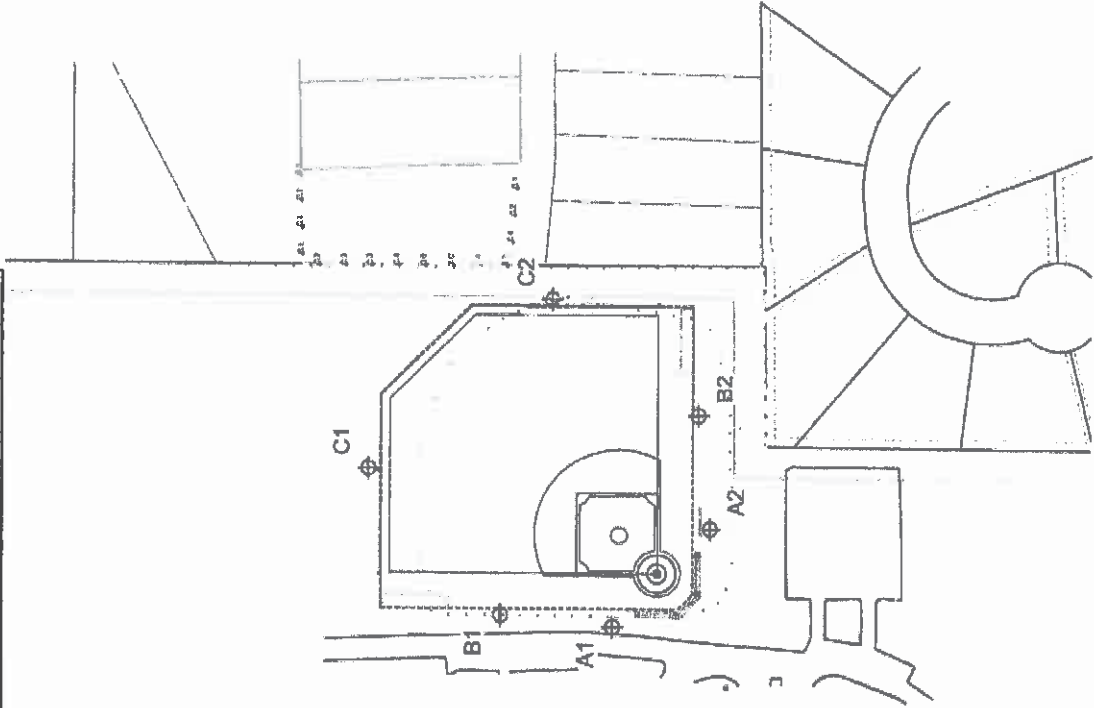


Pole location(s) ⦿ dimensions are relative to 0.0 reference point(s) ⦿



EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	Luminaires			
					LAMP TYPE	QTY	PER POLE	OTHER
2	A1-A2	70"	4'	74'	1500W NZ	7	7	0
1	B1	80"	4'	84'	1500W NZ	16	13	3
1	B2	80"	-	80'	1500W NZ	16	12	4
1	C1	70"	-	70'	1500W NZ	10	9	1
1	C2	70"	-	70'	1500W NZ	10	8	2
6	TOTALS					66	56	10



SCALE IN FEET 1 : 200



Pole location(s) ⬢ dimensions are relative to 0.0 reference point(s) ⓧ

MY PROJECT
Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY
Name: Parcel 4
Spacing: 30.0'
Height: 2.8' above grade

CONSTANT ILLUMINATION
ENTIRE GRID
Scan Average: 0.421
Maximum: 1.40
Minimum: 0.06
No. of Points: 15
Luminaire Type: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 56
Avg KW: 87.58 (95.2 max)

Guaranteed Performance: The **CONSTANT ILLUMINATION** described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN
By: Justin Van Soelen
File # / Date: 171842-D-prod-spillR1 12-Oct-16

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ILLUMINATION SUMMARY



MY PROJECT
Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY
Name: Parcel 5
Spacing: 30.0'
Height: 1.1' above grade

CONSTANT ILLUMINATION
ENTIRE GRID
Scan Average: 0.072
Maximum: 0.10
Minimum: 0.04
No. of Points: 15
LUMINAIRE INFORMATION
Luminaire Type: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 56
Avg RW: 87.58 (95.2 max)

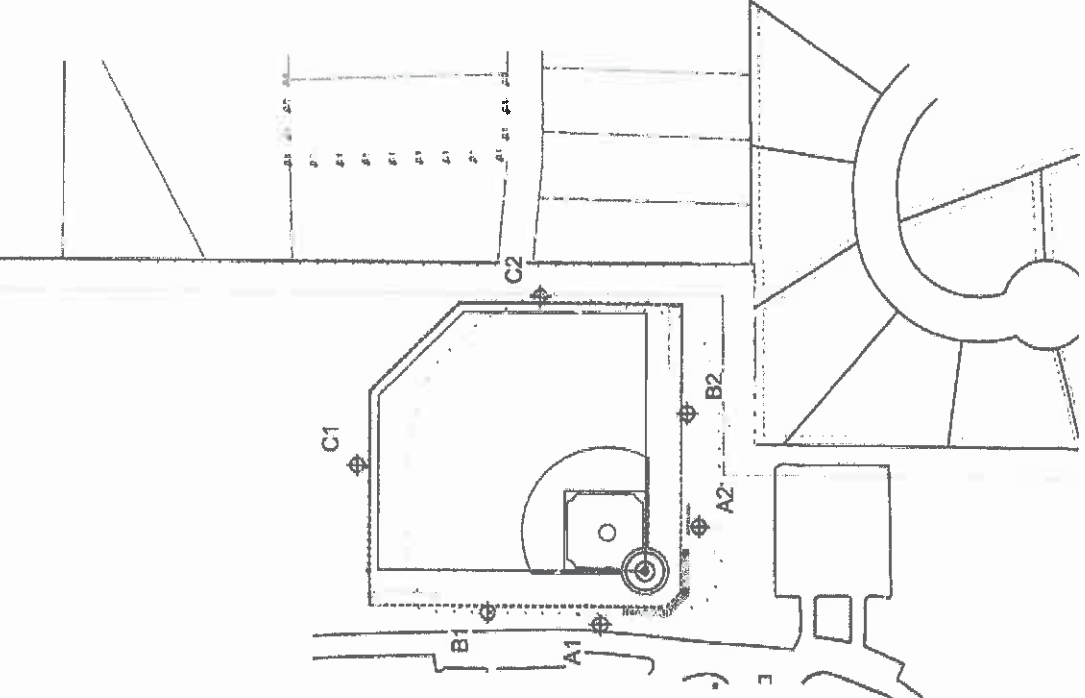
Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.
Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN
By: Justin Van Soelen
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ILLUMINATION SUMMARY

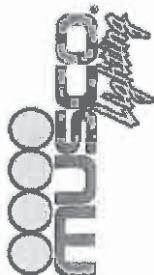
EQUIPMENT LIST FOR AREAS SHOWN						
Pole						
QTY	LOCATION	SIZE	GRADE ELEVATION	HEIGHT	LAMP TYPE	OTHER
2	A1-A2	70'	4'	74'	1500W MZ	7 0
1	B1	80'	4'	84'	1500W MZ	16 13
1	B2	80'	-	80'	1500W MZ	16 12
1	C1	70'	-	70'	1500W MZ	10 9
1	C2	70'	-	70'	1500W MZ	10 8
6	TOTALS					56 56



Pole location(s) ⚡ dimensions are relative to 0,0 reference point(s) ⚡

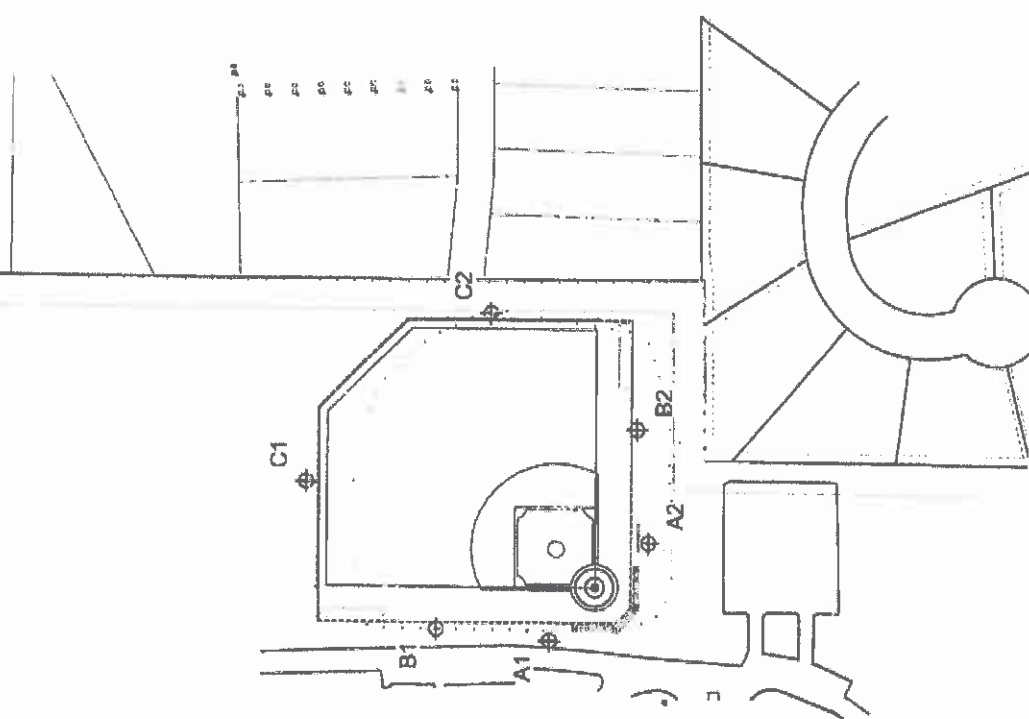


SCALE IN FEET 1 : 200



EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	SCOURING HEIGHT	LUMINAIRE TYPE	Luminaires			OTHER GRIDS
						QUANTITY	POLE	GRID	
2	A1-A2	70"	4'	74'	1500W MZ	7	7	0	0
1	B1	80"	4'	84'	1500W MZ	16	13	3	3
1	B2	80"	-	90'	1500W MZ	16	12	4	4
1	C1	70"	-	70'	1500W MZ	10	9	1	1
1	C2	70"	-	70'	1500W MZ	10	8	2	2
6	TOTALS					66	56	10	



SCALE IN FEET 1 : 200



Pole location(s) Ⓢ dimensions are relative to 0,0 reference point(s) ⓧ

MY PROJECT

Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY

Name: Parcel 6
Spacing: 30.0'
Height: 1.1' above grade

CONSTANT ILLUMINATION

Entire Grid
Scan Average: 0.042
Maximum: 0.05
Minimum: 0.03
No. of Points: 10
Luminaire Type: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 56
Avg KW: 87.58 [95.2 max]

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN

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File # / Date: 171842-D-prod-spallR1 12-Oct-16

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ILLUMINATION SUMMARY



MY PROJECT
 Name: Saint John Vianney High School Baseball
 Location: Saint Louis, MO

GRID SUMMARY
 Name: Parcel 7
 Spacing: 30.0'
 Height: -0.4' above grade

CONSTANT ILLUMINATION
 Entire Grid
 Scan Average: 0.033
 Maximum: 0.04
 Minimum: 0.02
 No. of Points: 12
 Luminaire Type: Green Generation
 Design Usage Hours: 5,000 hours
 Design Lumens: 134,000
 Avg Lamp Tilt Factor: 1.000
 No. of Luminaires: 56
 Avg KW: 87.58 (95.2 max)

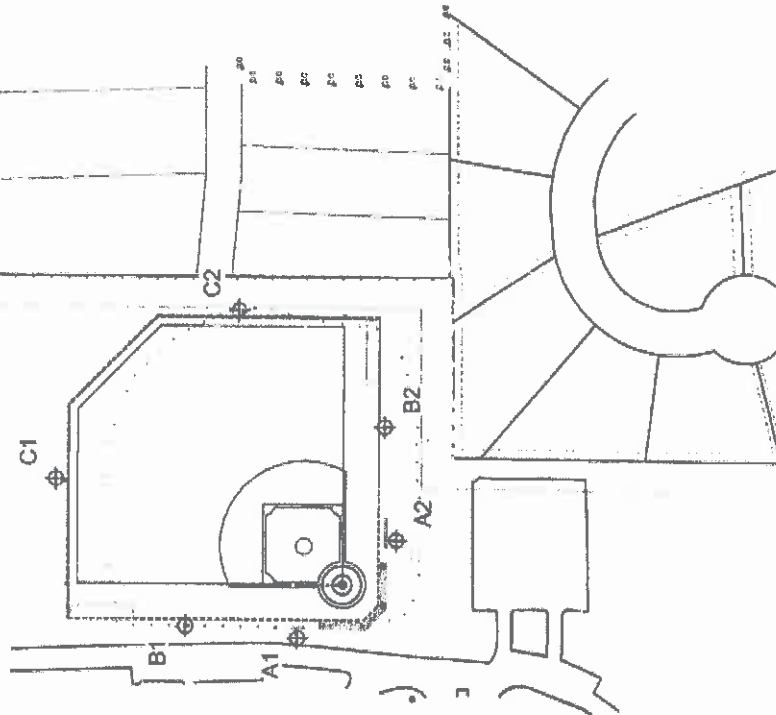
Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.
Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

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 By: Justin Van Soelen
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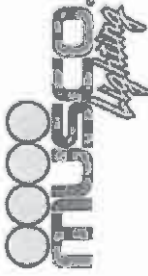
ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN									
QTY	LOCATION	Pole		Luminaires		CITY / POLE		HIS / OTHER	
		SIZE	GRADE ELEVATION	TYPE	UPR	POLE	GRID	GRID	GRASS
2	A1-A2	70'	4'	1500W MZ	74'	7	7	7	0
1	B1	80'	4'	1500W MZ	84'	16	13	3	
1	B2	80'	-	1500W MZ	80'	16	12	4	
1	C1	70'	-	1500W MZ	70'	10	9	1	
1	C2	70'	-	1500W MZ	70'	10	8	2	
6						66	56	10	



Pole location(s) Ⓢ dimensions are relative to 0,0 reference point(s) Ⓢ

SCALE IN FEET 1:200
 0' 200' 400'



MY PROJECT
Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY
Name: Parcel 8
Spacing: 30.0'
Height: -0.4' above grade

CONSTANT ILLUMINATION
Entire Grid
Scan Average: 0.055
Maximum: 0.07
Minimum: 0.03
No. of Points: 13
Luminaire Type: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp TIR Factor: 1.000
No. of Luminaires: 56
Avg RW: 87.58 (95.2 max)

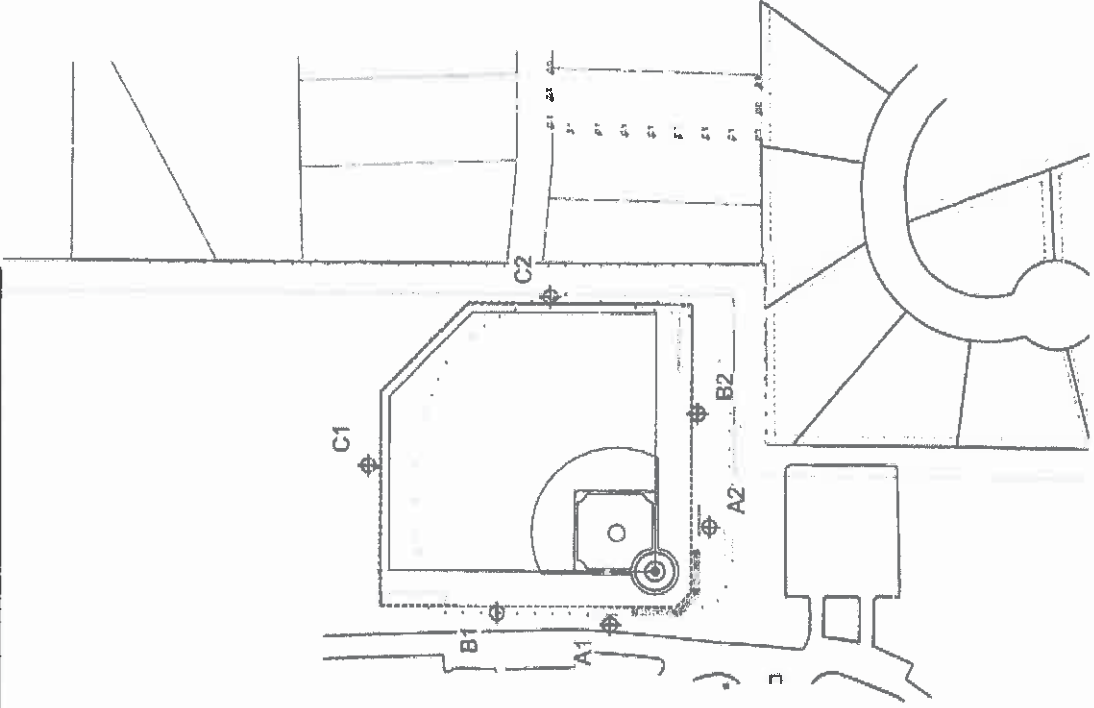
Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.
Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
Installation Requirements: Results assume +/- 3% nominal voltage at the side of the ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN
By: Justin Van Soelen
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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN									
Pole									
QTY	LOCATION	SIZE	GRADE ELEVATION	HEIGHT	LUMINAIRE TYPE	QTY	THIS POLE	GOOD	OTHER
2	A1-A2	70'	4'	74'	1500W MZ	7	7	7	0
1	B1	80'	4'	84'	1500W MZ	16	16	16	3
1	B2	80'	-	90'	1500W MZ	16	16	12	4
1	C1	70'	-	70'	1500W MZ	10	9	1	1
1	C2	70'	-	70'	1500W MZ	10	8	2	2
6	TOTALS					66	56	56	10



Pole location(s) ⦿ dimensions are relative to 9.0 reference point(s) ⦿

MY PROJECT
Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY

Name:	Parcel 9
Spacing:	30.0'
Height:	0.4' above grade

50-51-10-17	CONSTANT ILLUMINATION	—OR—CONSTANT FOOT-CANDLES
Scan Average:	Entire Grid	
Maximum:	0.098	
Minimum:	0.14	
No. of Points:	0.05	
	13	
50-51-24-RE-30-10-17-10-17-10-17	Green Generation	
Luminaire Type:	5,000 hours	
Design Usage Hours:	134,000	
Design Lumens:	1,000	
Avg Lamp Tilt Factor:	56	
No. of Luminaires:		
		Avg KW: 87.58 (95.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

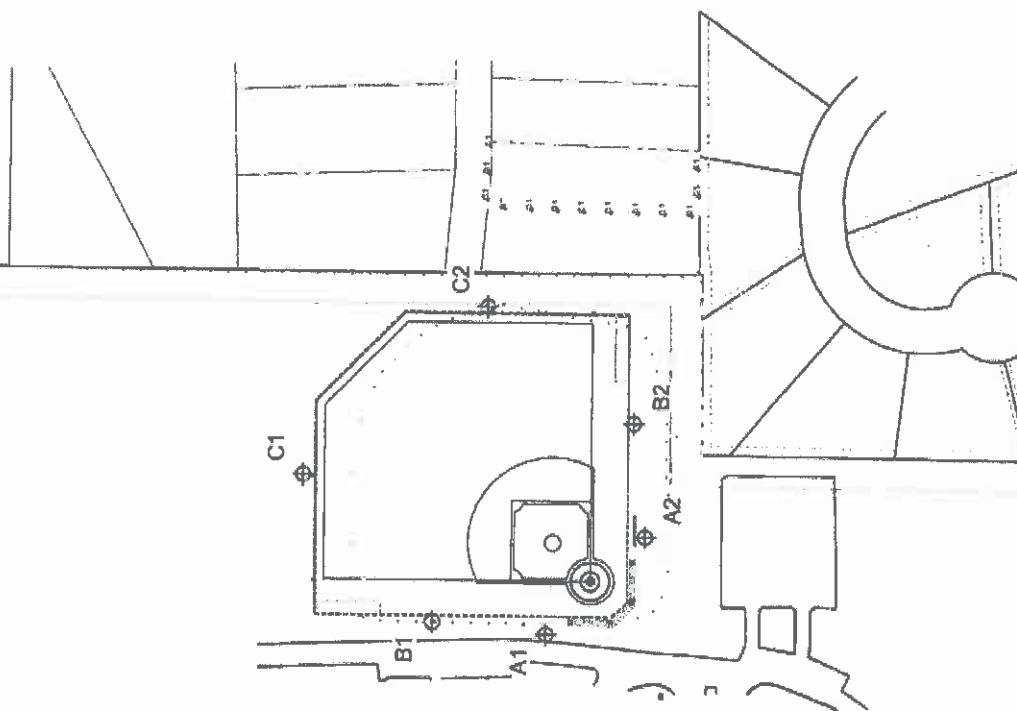
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN
By: Justin Van Soelen
File # / Date: 171842-D-prod-spillR1
12-Oct-16

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ILLUMINATION SUMMARY

Equipment List for Areas Show				Luminaire				Other	
Rate				Luminaire				Other	
Qty	Location	Size	Grade Elevation	Location	Height	Type	Qty / Pole	Watt	Other
2	A1-A2	70'	4'	74'	1500W	NZ	7	7	0
1	B1	80'	4'	84'	1500W	NZ	16	13	3
1	B2	80'	-	80'	1500W	NZ	16	13	4
1	C1	70'	-	70'	1500W	NZ	10	9	1
1	C2	70'	-	70'	1500W	NZ	10	8	2
5			TOTALS				65	54	10



SCALE IN FEET 1 : 200

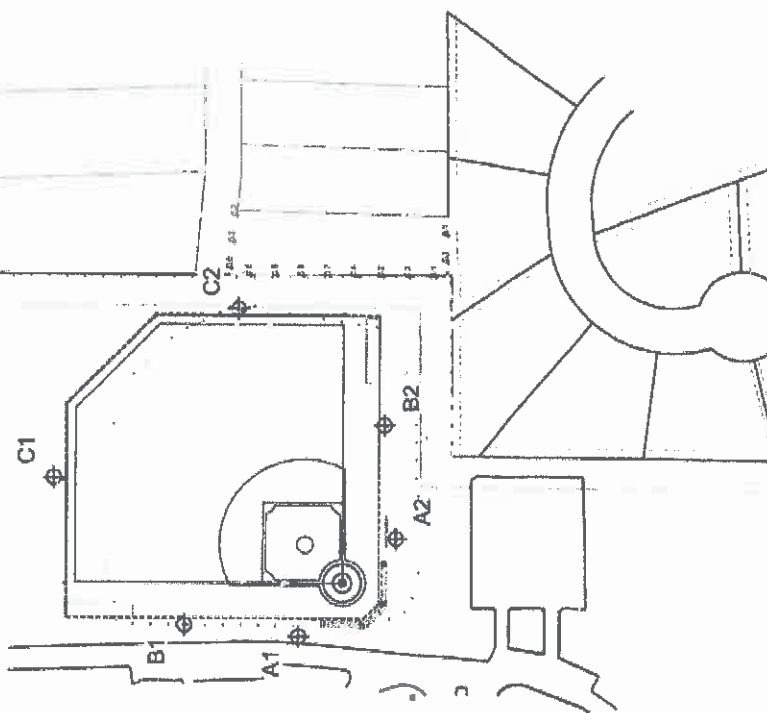


Pole location(s) ~~4~~ dimensions are relative to 0,0 reference point(s) \otimes



EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	BOUNCE HEIGHT	Luminaires			
					LAMP TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70"	4"	74'	1500W MZ	7	7	0
1	B1	80"	4"	84'	1500W MZ	16	13	3
1	B2	80"	-	80'	1500W MZ	16	12	4
1	C1	70"	-	70'	1500W MZ	10	9	1
1	C2	70"	-	70'	1500W MZ	10	8	2
6			TOTALS			66	56	10



SCALE IN FEET 1:200



Pole location(s) Φ dimensions are relative to 0,0 reference point(s) \otimes

MY PROJECT
Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY
Name: Parcel 10
Spacing: 30.0'
Height: 0.4' above grade

CONSTANT ILLUMINATION
Entire Grid
Scan Average: 0.426
Maximum: 0.92
Minimum: 0.08
No. of Points: 13
Luminaire Type: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 56
Avg KW: 87.58 (95.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.
Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

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By: Justin Van Soelen
File # / Date: 171842-D-prod-spillR1 12-Oct-16

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ILLUMINATION SUMMARY



MY PROJECT
 Name: Saint John Vianney High School Baseball
 Location: Saint Louis, MO

GRID SUMMARY
 Name: Parcel 11
 Spacing: 30.0'
 Height: -3.9' above grade

CONSTANT ILLUMINATION
 Scan Average: 0.032
 Maximum: 0.05
 Minimum: 0.02
 No. of Points: 12
 Luminaire Type: Green Generation
 Design Usage Hours: 5,000 hours
 Design Lumens: 134,000
 Avg Lamp Tilt Factor: 1.000
 No. of Luminaires: 56
 Avg KW: 87.58 (95.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

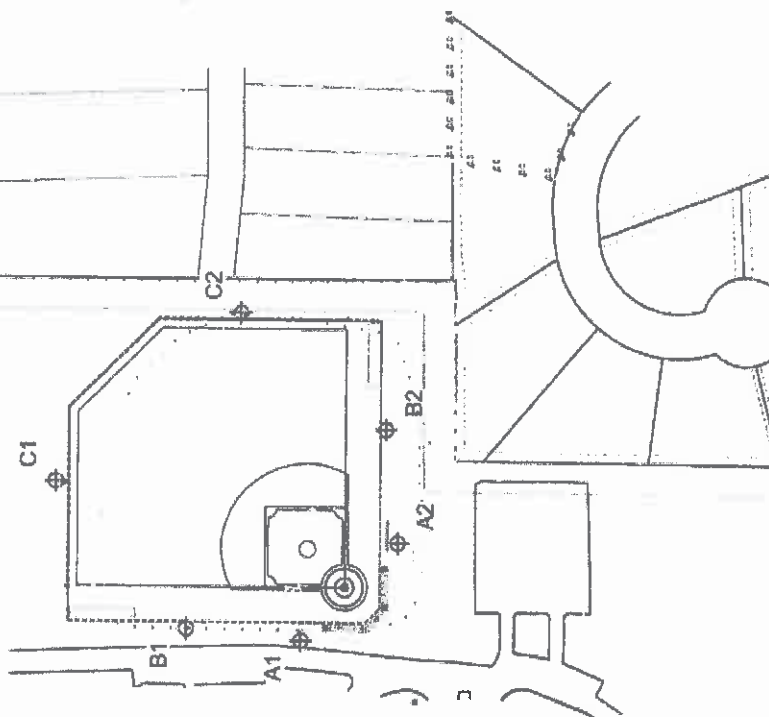
ENGINEERED DESIGN
 By: Justin Van Soelen
 File # / Date: 171842-D-prod-sp181 12-Oct-16

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	Pole		MOUNTING HEIGHT	Luminaires		QTY / POLE	THIS GRID	OTHER GRIDS
		SIZE	GRADE ELEVATION		TYPE	WATTAGE			
2	A1-A2	70'	4'	74'	1500W MZ	7	7	7	0
1	B1	80'	4'	84'	1500W MZ	15	15	15	3
1	B2	80'	-	80'	1500W MZ	15	15	15	4
1	C1	70'	-	70'	1500W MZ	10	9	1	1
1	C2	70'	-	70'	1500W MZ	10	8	2	2
6	TOTALS					66	56	56	10



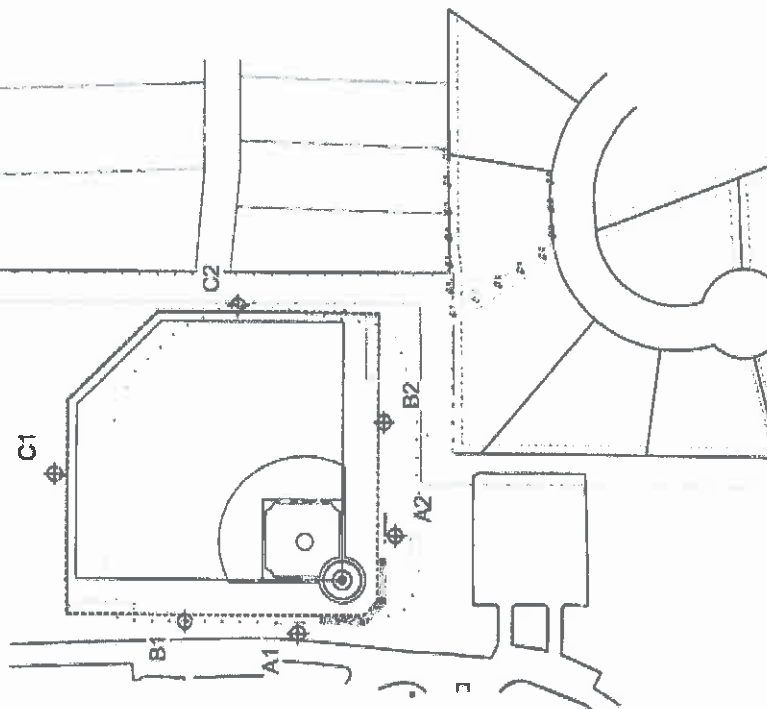
SCALE IN FEET 1 : 200

Pole location(s) dimensions are relative to 0.0 reference point(s)



EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	Luminaires		QTY / POLE	THIS GRID	OTHER GRID
					TYPE	WATTAGE			
2	A1-A2	70"	4"	74"	1500W MZ		7	7	0
1	B1	80"	4"	84"	1500W MZ		16	13	3
1	B2	80"	-	80"	1500W MZ		16	12	4
1	C1	70"	-	70"	1500W MZ		10	9	1
1	C2	70"	-	70"	1500W MZ		10	8	2
6	TOTALS						66	56	10



SCALE IN FEET 1 : 200



Pole location(s) ⬢ dimensions are relative to 0.0 reference point(s) ⬢

MY PROJECT
Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY
Name: Parcel 12
Spacing: 30.0"
Height: -10.2' above grade

CONSTANT ILLUMINATION
ENTIRE GRID
Scan Average: 0.073
Maximum: 0.14
Minimum: 0.03
No. of Points: 14
LUMINAIRE INFORMATION
Luminaire Type: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of luminaires: 56
Avg KW: 87.58 (95.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

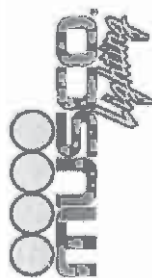
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

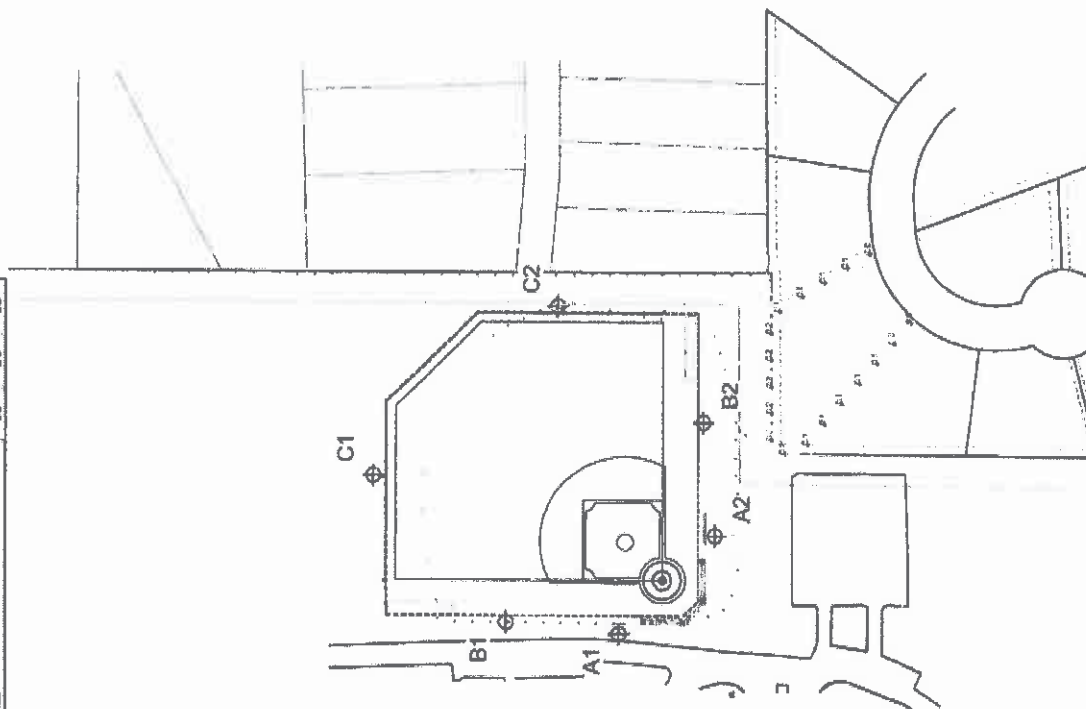
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By: Justin Van Soelen
File # / Date: 171842-D-prod-spill R1 12-Oct-16

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ILLUMINATION SUMMARY



EQUIPMENT LIST FOR AREAS SHOWN									
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	Luminaires				
					LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRID	
2	A1-A2	70"	4"	74"	1500W MZ	7	7	0	
1	B1	80"	4"	84"	1500W MZ	16	13	3	
1	B2	80"	-	80"	1500W MZ	16	12	4	
1	C1	70"	-	70"	1500W MZ	10	9	1	
1	C2	70"	-	70"	1500W MZ	10	8	2	
6					TOTALS	66	56	10	



SCALE IN FEET 1 : 200



Pole location(s) ⦿ dimensions are relative to 0.0 reference point(s) ⦿

MY PROJECT	Name: Saint John Vianney High School Baseball Location: Saint Louis, MO
GRID SUMMARY	Name: Parcel 13 Spacing: 30.0' Height: -16.9' above grade
CONSTANT ILLUMINATION	<p>Entire Grid</p> <p>Scan Average: 0.118 Maximum: 0.24 Minimum: 0.04 No. of Points: 18</p> <p>Luminaire Type: Green Generation Design Usage Hours: 5,000 hours Design Lumens: 134,000 Avg Lamp Tilt Factor: 1.000 No. of Luminaires: 56 Avg KW: 87.58 (95.2 max)</p>

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

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ILLUMINATION SUMMARY



MY PROJECT
Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

GRID SUMMARY
Name: Parcel 14
Spacing: 30.0'
Height: -13.4' above grade

CONSTANT ILLUMINATION
ENTIRE GRID
Scan Average: 0.065
Maximum: 0.14
Minimum: 0.03
No. of Points: 17
Luminaire Type: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 56
Avg KW: 87.58 (95.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

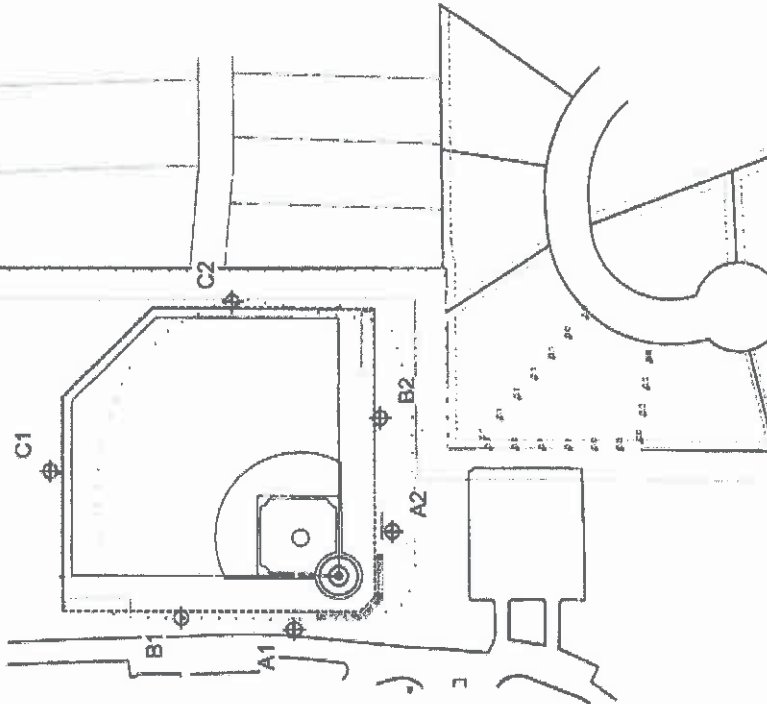
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 5 feet (1m) of design locations.

ENGINEERED DESIGN
By: Justin Van Soelen
File # / Date: 171842-D-prod-spillR1 12-Oct-15

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN									
Poles				Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	HEIGHT	TYPE	QTY / THIS GRID	OTHER GRID		
2	A1-A2	70'	4'	74'	1500W MZ	7	7	0	
1	B1	80'	4'	84'	1500W MZ	16	13	3	
1	B2	80'	-	80'	1500W MZ	16	12	4	
1	C1	70'	-	70'	1500W MZ	10	9	1	
1	C2	70'	-	70'	1500W MZ	10	8	2	
6	TOTALS					66	56	10	



Pole location(s) ⬢ dimensions are relative to 0.0 reference point(s) ⓧ

SCALE IN FEET 1 : 200





MY PROJECT	Name: Saint John Vianney High School Baseball Location: Saint Louis, MO
GRID SUMMARY	Name: Parcel 15 Specs: 30.0' Height: -11.9' above grade
CONSTANT ILLUMINATION	<p>Entire Grid</p> <p>Scan Average: 0.025 Maximum: 0.03 Minimum: 0.02 No. of Points: 9</p> <p>Luminaire Type: Green Generation Design Usage Hours: 5,000 hours Design Lumens: 134,000 Avg Lamp Tilt Factor: 1.000 No. of Luminaires: 56 Avg KW: 87.58 (95.2 max)</p>

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN

By: Justin Van Soelen

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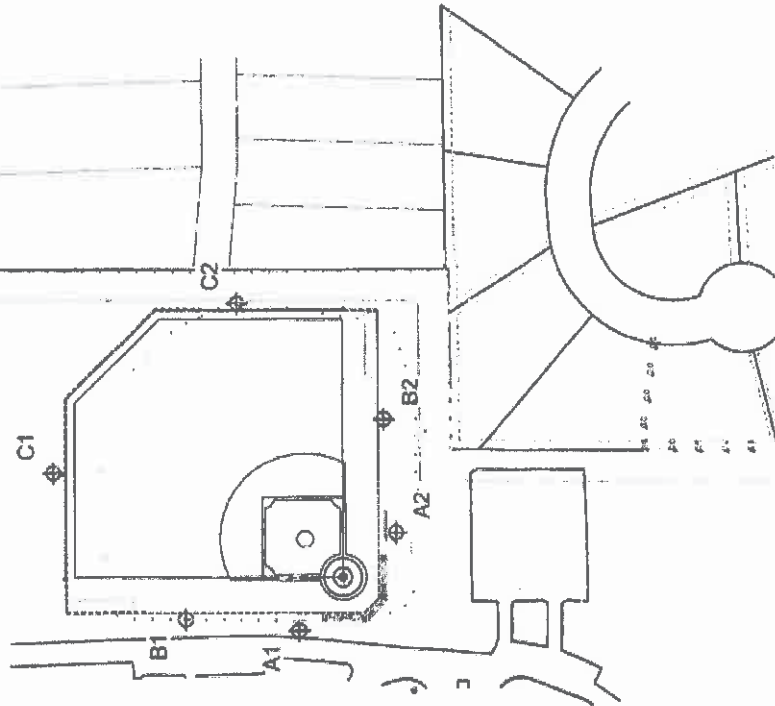
ILLUMINATION SUMMARY

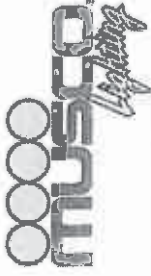
Pole location(s) ⬢ dimensions are relative to 0,0 reference point(s) ⊗

SCALE IN FEET 1 : 200



EQUIPMENT LIST FOR AREAS SHOWN						
QTY	LOCATION	SIZE	Pole	Luminaires		
				SPACING HEIGHT	GRID CROSS	OVERLAP CROSS
2	A1-A2	70'	4'	1500W MZ	7	7
1	B1	80'	4'	1500W MZ	16	13
1	B2	80'	-	1500W MZ	16	12
1	C1	70'	-	1500W MZ	10	9
1	C2	70'	-	1500W MZ	10	8
6	TOTALS				66	56





MY PROJECT
Name: Saint John Vianney High School Baseball
Location: Saint Louis, MO

EQUIPMENT LAYOUT
INCLUDES:
• Baseball
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN				
Pole		Luminaire		
CITY	LOCATION	SIZE	GRADE ELEVATION	WIRING HEIGHT
2	A1-A2	70'	4'	74'
1	B1	80'	4'	84'
1	B2	80'	-	80'
2	C1-C2	70'	-	70'
6	TOTALS			
				66

SINGLE LUMINAIRE AMPERAGE DRAW CHART				
Ballast Specifications (50 volt power factor)		Line Amperage Per Luminaire (phase draw)		
Single Phase Voltage	208	240	277	347
1500 watt MZ	8.6	8.3	7.5	5.1
			4.7	3.7

ENGINEERED DESIGN
By: Justin Van Soelen
File # / Date: 171842-D-prod-spillR1 12-Oct-16

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EQUIPMENT LAYOUT

